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NOTES ON GEOGRAPHIC DISTRIBUTION

Reptilia, Squamata, Scincidae, *Lygosoma haroldyoungi* (Taylor, 1962): New distribution records

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ABSTRACT: Three newly recorded localities for *Lygosoma haroldyoungi* (Taylor, 1962) in Thailand are presented, which represent first sightings for Khon Kaen, Sakhon Nakhon and Mukdaharn provinces. An updated compilation of the known geographical distribution of *L. haroldyoungi* is provided.

Lygosoma haroldyoungi was described as a new species to science, namely *Riopa haroldyoungi*, on the basis of a single specimen (holotype, FMNH 178213) collected from the "Base of Doi Suthep near Chiang Mai", Chiang Mai Province, northern Thailand (see Taylor, 1962). Very few records of that species were subsequently made, and our knowledge about this secretive skink and its geographical distribution remains minimal. Currently, the species is known to exist in only two countries: Thailand and Laos. The known distribution in Thailand was recently reported by Pauwels et al. (2008) and included thirteen localities. This skink lives in the northern, northeastern and southeastern regions of Thailand. However, it has not been reported in the western, central nor southern portions of the country. In Laos, *L. haroldyoungi* was first reported by Moravec and Böhme (2008). This report was based on a single specimen (NMP6V 34433) collected near Nan Kheuat in the vicinity of Nam Ngum reservoir (approximately 18°30' N, 102°30' E) in Vientiane Province. A second record of *L. haroldyoungi* from Laos was later presented by Orlov et al. (2010), also from Vientiane Province, in Ban Wang Mone, Ban Phone District. Furthermore, *L. haroldyoungi* is suspected to occur in Myanmar and Cambodia (Pauwels *et al.* 2008, Das 2010). Its global conservation status according to IUCN standards was evaluated as of Least Concern (Pauwels, 2010). The conservation status of *L. haroldyoungi* in Thailand was evaluated as Near Threatened by Nabhitabhata and Chanard (2005).

In 2009, the photograph of a live individual of *Lygosoma haroldyoungi* (Figure 1) was taken by Punnita Sriyoung in Phu Sra Dok Bua National Park, Paa Rai Subdistrict, Don Tarn District, Mukdaharn Province (northeastern Thailand) (Figure 3). The skink was found on the ground behind the park's headquarters and nearby the Phu Pha Tam cliff. After being photographed, it was released into its natural habitat. Some photographs were sent to the herpetologist Sunchai Makchai, who identified it. Since the photographs were identified, information about that locality has not been published anywhere. On 20 January 2010, these photographs were presented to the senior author and are now included in the present work. *Lygosoma haroldyoungi* had never been recorded from Mukdaharn Province and no voucher specimen from Mukdaharn Province is so far available, but the identification by photos leaves no doubt on its identity. Identification of *L. haroldyoungi* is made on basis of life coloration and its pattern as following: alternate black and yellow-green bands on neck to 1/3 of body length which are becoming light-yellow on sides, remaining part of body alternate black and reddish; head black above; color pattern of tail is an alternation of black and ultramarine bands; five alternate black bands on neck and 25 on body. This locality extends ca 140 km in linear distance to the nearest known range of *L. haroldyoungi* southeastwards (Sakhon Nakhon Prov.) and close to the border between three countries (Figure 3): Thailand, Laos and Cambodia.

During field work in Khao Suan Kwang Zoo (16°51'31" N, 102°51'42" E), Khao Suan Kwang District, Khon Kaen Province, northeastern Thailand, a live specimen of

FIGURE 1. Live specimen of *Lygosoma haroldyoungi* from Phu Sra Dok Bua National Park, Don Tarn District, Mukdaharn Province, northeastern Thailand. Photography Punnita Sriyoung..

Lygosoma haroldyoungi was captured on the ground within a Dipterocarp forest. The skink was photographed (Figure 2) and later released into its habitat. The finding of *L. haroldyoungi* in Khon Kaen Province (Figure 3) also represents a first provincial record. However, no voucher specimen from Khon Kaen Province has been reported.

Besides these photographic records, we examined all available voucher specimens in the herpetological collections of the Thailand Natural History Museum (THNHM) and the National Science Museum (Prathum Thani Province). A total of four specimens of *L. haroldyoungi* was found and examined. One of them (THNHM 2784) represents the first provincial record for Sakhon Nakhon Province. No other information than the province was provided on its label. The other three voucher specimens are THNHM 10638, 12555 and THNHM 12850. THNHM 10638 (former CTNRC 522-580)'s locality was labeled as "Fang Thaton," and the specimen was collected by Dumrong Chaiglom on 11 January 1967. This specimen was first reported by Soderberg (1967). The second specimen, THNHM 12555, was collected from "Phu Khieo, Chaiyaphum in 1998 by Sewi". The locality of the third specimen, THNHM 12850, was "Khao Ang Roeni, Chachoengsao" [=Khao Ang Ru Nai Wildlife Sanctuary, Chachoengsao Province]. The label of this specimen indicates that it was collected by "Pongsak" [i.e., Phongsak Phonsena, a government official from the Department of National Parks, Wildlife and Plant Conservation] on 3 August 1994.

Based upon the above new data and the available literature (Pauwels *et al.* 2008), there is currently a total of sixteen known localities for *Lygosoma haroldyoungi* in Thailand. All of them are represented in Figure 3. Up to this date, our knowledge on *Lygosoma haroldyoungi* remains very limited. Published works include a few reports on new localities (Way 1975; Pauwels *et al.* 2008; Moravec and Böhme 2008; Orlov *et al.* 2010), summarized distribution data (Chan-ard *et al.* 1999; Nabhitabhata *et al.* 2004; Nabhitabhata and Chan-ard 2005) and taxonomic studies (Taylor 1962, 1963; Grossmann 2007; Geissler *et al.* 2011). Unfortunately, other disciplinary studies on this skink are lacking, even if a few data on natural history are available (Geissler *et al.* 2011).

FIGURE 3. Known distribution of *Lygosoma haroldyoungi* [localities 1-13 and 17-19 obtained from literatures as mention in the text (as closed triangle), 14-16 are newly recorded data (as closed circle)]. Numbers are 1) Chiang Mai province: Doi Suthep; 2) Chiang Mai prov.: Fang; 3) Chiang Rai prov.: no exactly locality; 4) Phitsanulok prov.: Thung Salaeng Luang; 5) Phetchabun prov.: Nam Nao; 6) Loei prov.: Phu Luang; 7) Loei prov.: Chiang Karn; 8) Chaiyaphum prov.: Phu Khieo; 9) Nong Khai prov.: Rattanawapee; 10) Nong Khai prov.: Bueng Karn [presently Bueng Karn Province]; 11) Nakhon Ratchasima prov.: Wang Nam Khieo; 12) Chachoengsao prov.: Khao Ang Ru Nai; 13) Chanthaburi prov.: Khao Soi Dao; 14) Khon Kaen prov.: Khao Suan Kwang; 15) Sakhon Nakhon prov.: no exact locality; and 16) Mukdaharn prov.: Phu Sra Dok Bua National Park; 17-19) Laos PDR, Vientiane Province.

FIGURE 2. Live specimen of *Lygosoma haroldyoungi* from Khao Suan Kwang Zoo, Khao Suan Kwang District, Khon Kaen Province, northeastern Thailand. Photography Isara Patawang.

The conservation status of this skink was formerly assessed as "Data Deficient" in 1996 and as "Insufficiently Known" in 1994 (Pauwels 2010). The status of *L. haroldyoungi* in Thailand has been assessed as Near Threatened by Nabhitabhata and Chan-ard (2005). The current global conservation status of *L. haroldyoungi* has been assessed as of Least Concern (Pauwels 2010) because since 2005 it has been shown as a taxon with a wide range within Thailand and it is not under any major threat and unlikely to be experiencing significant population decline due to the obvious ecological adaptability of the species. The occurrence of *L. haroldyoungi* in Mukdaharn implies that the species might exist in several protected areas (e.g., national parks, wildlife sanctuaries and non-hunting areas) throughout northeastern, northern and southeastern Thailand.

Lygosoma haroldyoungi has been found so far in only two countries, Thailand and Laos. Some authors (Moravec and Böhme 2008; Pauwels *et al.* 2008; Das 2010) suspected that its distribution range probably extends into neighboring countries of Thailand, such as Myanmar or Cambodia. Thus, field surveys and examination of natural history collections made in those countries should be assessed in regard to identify possible undiscovered populations of *L. haroldyoungi*. We agree with prior suspicions about the

occurrence of *L. haroldyoungi* in Cambodia and Myanmar, since there is no zoogeographical reason why the extended range of the species would not reach border areas of those countries. Known localities of the species in the provinces of Chachoengsao, Chanthaburi and Mukdaharn are quite close to Cambodia. Similarly, the localities in Fang District (Chiang Mai Province) and Chiang Rai Province are also quite close to the border between Thailand and Myanmar.

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